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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,296	06/10/2005	Minchiro Tonosaki	270749US6PCT	3462
22850 7590 06/11/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER LEO, LEONARD R				
ART UNIT 3744		PAPER NUMBER		
NOTIFICATION DATE 06/11/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/538,296

Applicant(s)

TONOSAKI ET AL.

Examiner

Leonard R. Leo

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

The amendment filed on March 26, 2009 has been entered. Claims 1-13 are pending, and claim 9 remains withdrawn from further consideration.

Claim Rejections - 35 USC § 112

Claims 11-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification lacks an adequate written description of the invention. There is no basis for “a top surface of the first base plate is covered with a protective film.” Consistent with claim 1 reciting “a body with protrusions on a bottom face thereof,” the “top surface of the first plate” is the external surface, not the surface in contact with the working fluid.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al.

Nelson et al (Figure 2) discloses a heat transport device comprising a first base plate 305B including a liquid suction and retention unit 335, a body 330 with protrusions, a second

base plate 305C composed of polyimide including a first concavity 315B, a second concavity 315A, a first ditch 320A forming a channel between the first concavity 315B and the second concavity 315A, and a second ditch 320B forming a channel between the second concavity 315A and the liquid suction and retention unit 335; wherein the base plates are glued together, but does not disclose a resin bonding material.

The Examiner takes Official Notice of resin material for its use in the bonding art and the selection of any known equivalent to bond two structures together would be within the level of ordinary skill in the art. Furthermore, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 2-3, Nelson et al discloses third base plate 305A is glued together with the first and second base plates 305B, 305C.

Regarding claims 4-6, Nelson et al discloses a thin, flexible metal third base plate 305A, which is read as a "laminating sheet." Nelson et al discloses the first base plate 305B is composed of copper. However, it would have been obvious to one of ordinary skill in the art of heat sinks to employ aluminum, a well known obvious substitution for copper in heat transfer applications, to reduce cost. Further, it is well known in the art of heat sinks to employ a copper heat spreader in combination with aluminum to improve heat transfer.

Regarding claim 7, the specific difference in coefficient of linear expansion is considered to be an obvious design choice, producing no new and/or unexpected results and solving no stated problem. One of ordinary skill in the art would employ compatible materials to minimize thermal expansion between the two structures to prevent damage.

Regarding claim 8, Nelson et al (column 8, lines 34-36) discloses multiple (i.e. more than three) base plates may be employed.

Claim 11 as best understood is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al in view of Yazu et al.

The device of Nelson et al lacks a top surface covered with a protective film.

Yazu et al (Figure 12) discloses a heat sink device comprising a copper base plate 2 for mounting component 38 and a copper oxide film for the purpose of improving the bond strength (column 10, lines 1-5).

Since Nelson et al and Yazu et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Yazu et al would have been recognized in the pertinent art of Nelson et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Nelson et al a copper oxide film for the purpose of improving the bond strength as recognized by Yazu et al.

Allowable Subject Matter

Claim 12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

The objection to the drawings under 37 CFR 1.83(a) is withdrawn in view of the amendment to claim 4.

The rejection of claims 1-8 and 10 under 35 U.S.C. 112, second paragraph, is withdrawn in view of the claim amendments.

Applicant's arguments have been fully considered but they are not persuasive.

As per MPEP 2113, applicant is reminded that:

APPARATUS CLAIMS MUST BE STRUCTURALLY DISTINGUISHABLE FROM THE PRIOR ART

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device *is*, not what a device *does*." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

In this respect, applicant argues the device of Nelson et al does not ***function*** in a manner similar to the instant invention. However, as applied above, the claims do not ***structurally*** define over the device of Nelson et al.

Regarding claim 10, the functions of the structural limitations do not afford any patentable weight in the method of manufacturing claim.

No further comments are deemed necessary at this time.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/ Leonard R. Leo /
PRIMARY EXAMINER
ART UNIT 3744

June 9, 2009